

**REMARKS**

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1-15 and 18-21 are now present in the application. Claims 1, 2, 4-8, 10, 11, 13, 15, 18, 20 and 21 have been amended. Claims 1, 8, 13 and 20 are independent. Reconsideration of this application, as amended, is respectfully requested.

**Claim Rejections Under 35 U.S.C. §112**

Claims 1, 2, 4-6, 10, 11, 13, 15, 18, 20 and 21 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

In view of the foregoing amendments, it is respectfully submitted that this rejection has been addressed. Accordingly, all pending claims are now definite and clear. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, are therefore respectfully requested.

**Claim Rejections Under 35 U.S.C. § 102**

Claims 1-15 and 18-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gurney, "An Introduction to Neural Networks." This rejection is respectfully traversed.

In light of the foregoing amendments to the claims, Applicant respectfully submits that this rejection has been obviated and/or rendered moot. As the Examiner will note, independent claims 1 and 8 have been amended to recite a combination of elements including "the plurality of modalities of the neurons including auditory modality and visual modality so that the neurons

handle a plurality of different input vectors of auditory modality and visual modality.” Applicant respectfully submits that the above combination of elements as set forth in amended independent claims 1, 8, 13 and 20 are not disclosed nor suggested by the references relied on by the Examiner.

Applicant respectfully submits that, in the present invention, the neurons in the neural network unit have a plurality of modalities different from each other. The plurality of modalities of the neurons including auditory modality and visual modality so that the neurons can handle a plurality of different input vectors of auditory modality and visual modality. Therefore, the neurons can handle a plurality of different input vectors each having a particular, different length, such as auditory data and visual data. In other words, according to the present invention, a plurality of different data such as the five senses of a human being (e.g., auditory sense, visual sense of a human being, etc.) can be inputted together to this neural network at the same time and processed by interconnecting the neurons in this system.

Unlike the present invention, although Gurney discloses modalities, these modalities are the same. Therefore, the modalities of Gurney can only handle one input vector having one length. Accordingly, Gurney fails to teach “the plurality of modalities of the neurons including auditory modality and visual modality so that the neurons handle a plurality of different input vectors of auditory modality and visual modality” as recited in claims 1, 8, 13 and 20.

Since Gurney fails to teach each and every limitation of amended independent claims 1, 8, 13 and 20, Applicant respectfully submits that claims 1, 8, 13 and 20 and their dependent claims clearly define over the teachings of Gurney. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102 are respectfully requested.

### CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but merely to show the state of the prior art, no further comments are necessary with respect thereto.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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